

## Ethnicity, schooling, and merit in the Netherlands

Werfhorst, Herman G. van de; Tubergen, Frank van

Postprint / Postprint

Zeitschriftenartikel / journal article

Zur Verfügung gestellt in Kooperation mit / provided in cooperation with:

www.peerproject.eu

### Empfohlene Zitierung / Suggested Citation:

Werfhorst, H. G. v. d., & Tubergen, F. v. (2007). Ethnicity, schooling, and merit in the Netherlands. *Ethnicities*, 7(3), 416-444. <https://doi.org/10.1177/1468796807080236>

### Nutzungsbedingungen:

Dieser Text wird unter dem "PEER Licence Agreement zur Verfügung" gestellt. Nähere Auskünfte zum PEER-Projekt finden Sie hier: <http://www.peerproject.eu> Gewährt wird ein nicht exklusives, nicht übertragbares, persönliches und beschränktes Recht auf Nutzung dieses Dokuments. Dieses Dokument ist ausschließlich für den persönlichen, nicht-kommerziellen Gebrauch bestimmt. Auf sämtlichen Kopien dieses Dokuments müssen alle Urheberrechtshinweise und sonstigen Hinweise auf gesetzlichen Schutz beibehalten werden. Sie dürfen dieses Dokument nicht in irgendeiner Weise abändern, noch dürfen Sie dieses Dokument für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, aufführen, vertreiben oder anderweitig nutzen.

Mit der Verwendung dieses Dokuments erkennen Sie die Nutzungsbedingungen an.

**gesis**  
Leibniz-Institut  
für Sozialwissenschaften

### Terms of use:

This document is made available under the "PEER Licence Agreement". For more Information regarding the PEER-project see: <http://www.peerproject.eu> This document is solely intended for your personal, non-commercial use. All of the copies of this documents must retain all copyright information and other information regarding legal protection. You are not allowed to alter this document in any way, to copy it for public or commercial purposes, to exhibit the document in public, to perform, distribute or otherwise use the document in public.

By using this particular document, you accept the above-stated conditions of use.

Mitglied der  
  
Leibniz-Gemeinschaft

Copyright © SAGE Publications 2007 (Los Angeles, London, New Delhi and Singapore) 1468-7968  
Vol 7(3): 416-444; 080236  
DOI: 10.1177/1468796807080236  
<http://etn.sagepub.com>

## **Ethnicity, schooling, and merit in the Netherlands**

**HERMAN G. VAN DE WERFHORST**

*University of Amsterdam, the Netherlands*

**FRANK VAN TUBERGEN**

*Utrecht University, the Netherlands*

**ABSTRACT** We examine to what extent ethnicity affects academic ability measured in the first year of secondary school and secondary school type in the Netherlands. We focus on second-generation immigrants. The empirical results indicate that academic ability (both in mathematics and language) is not affected by ethnicity, independent of parents' occupation, education, and resources. On a bi-variate level, children of Turkish and Moroccan immigrants in the Netherlands are found relatively often in lower tracks in secondary school. This relationship is fully driven by social class and merit, operationalized as including ability and effort. Moreover, children of Turkish, Surinamese and Antillean migrants are, relative to Dutch children from similar backgrounds and merit, more often found in higher tracks in secondary school. However, given the very skewed distribution of educational attainment of immigrants, it is questionable whether 'class versus ethnicity models' can accurately compare achievements of native and immigrant children in the Netherlands.

**KEYWORDS** education ● ethnic minorities ● meritocracy ● social class

In the past decades, social research has paid much attention to ethnic inequalities in educational achievements. For a number of countries it has been shown that children from ethnic minority backgrounds perform worse than other children (e.g. Kalmijn and Kraaykamp, 2003), albeit to a varying extent for different ethnic groups. However, a substantial fraction of this 'ethnicity effect' is caused by the fact that children of ethnic minorities generally come from less advantaged social backgrounds. Some studies

even report a 'net black advantage' (Bennett and Xie 2003); among persons from similar backgrounds ethnic minorities do relatively well.

Although the class versus ethnicity debate has been high on the agenda in the past decades, it has not paid full attention to an important analytical distinction in processes leading to educational differentiation. Studies on ethnic educational inequality largely ignore the distinction between primary and secondary effects on educational outcomes that has been highlighted in educational stratification research since the 1970s (Boudon, 1974; Goldthorpe, 1996a). This distinction is useful because it separates inequalities that result from learning abilities (primary effects) from those that result from variations in choices conditional upon learning abilities (secondary effects). Incorporating this distinction into the study of ethnic educational inequality will contribute to the class versus ethnicity debate, because the impact of ethnicity can be further disentangled into ethnic inequality resulting from demonstrated learning abilities and from choices among people with equal abilities (Hustinx, 2002).

More generally, an important sociological problem of educational inequalities is whether school achievements are distributed according to meritocratic principles. Usually, the extent to which educational achievements are meritocratic is investigated by looking at academic ability, assuming that a distribution on the basis of 'talent' is meritocratic. However, recent educational stratification research has extended the conceptualization of merit to be more in line with Michael Young's original definition of Merit being equal to the sum of IQ and Effort (Breen and Goldthorpe, 2001; Luyten and Bosker, 2004; Meijnen, 2004). Rather than focusing on academic ability alone (the 'IQ'-element in Young's definition), researchers should also include 'effort' in their models. Although we do not claim that, by definition, primary effects are meritocratic and secondary effects are not, it is relevant to examine the extent to which class and ethnic educational inequalities are meritocratic by extending the conceptualization of merit in line with recent research.

We are primarily interested in the question to what extent ethnic and social class inequalities in educational outcomes are meritocratic in the Netherlands according to a broader conceptualization of merit than usually seen. We disentangle the primary effects of class and ethnic background on academic ability from secondary effects of social and ethnic background on secondary school type, controlling for narrower and broader conceptions of merit. Furthermore, we aim to explain further potential schooling differences by observing social and ethnic variations in family resources, such as parental involvement and the use of the Dutch language. This will be done using the 1993 educational cohort study of the Netherlands (Voortgezet Onderwijs Cohort Leerlingen (VOCL), carried out for various years), consisting of pupils who enrolled in secondary school in 1993 (at a nominal age of 12). We compare second-generation immigrants with children of

native-born parents and focus on the choice of secondary school type in grade 3 of secondary school (age: 14–15 years). In the first two grades, many schools offer ‘bridge years’ that combine several school types in order to delay the decision in which type to enrol. This makes it complicated to analyse the choice of secondary school type.<sup>1</sup> An additional advantage of studying third-year school type is that ‘over-advised’ children (children who get advice from their teacher to go on to a higher type of secondary school than would have been expected on the basis of their test scores) have had the chance to adjust their type of schooling if necessary.

The article proceeds as follows. First we give a short description of the main ethnic minority groups in the Netherlands, and a sketch of the Dutch educational system. Then we proceed with the class versus ethnicity debate in the Netherlands, and connect it to the sociological debate on primary and secondary effects. After that, some descriptive findings are presented regarding ethnic differences in schooling, as well as a more rigorous empirical test of the impact of various explanatory factors. In the conclusion and discussion, some additional explanations are given for the described ethnic variation.

## MAIN ETHNIC MINORITY GROUPS IN THE NETHERLANDS

On 1 January 2006, there were more than three million first- and second-generation immigrants in the Netherlands (CBS, 2006). In a country of just over 16 million people, this means that almost 20 percent are an immigrant, or native-born from at least one foreign-born parent.

Immigrant groups in the Netherlands are commonly classified into four categories. The first category comprises immigrants who started to come to the Netherlands as ‘guest workers’ during the 1960s, mainly from Turkey and Morocco, but also from Greece, Spain, Portugal and Italy. They were invited to come to the Netherlands to work in low-skilled jobs. There are now about 364,000 Turks and 323,000 Moroccans in the Netherlands, together comprising almost 5 percent of the entire Dutch population. This includes both foreign-born immigrants (first generation), as well as their children who were born in the Netherlands (the second-generation immigrants).

A second category of immigrant comes from the former colonies of the Netherlands: Indonesia, Suriname and the Netherlands’ Antilles. Many Indonesians migrated to the Netherlands at the end of the 1940s and at the beginning of the 1950s, when Indonesia gained independence. Today, there are almost 400,000 Indonesians in the Netherlands, including the foreign-born immigrants and their children. The largest influx of Surinamese migrants came to the Netherlands in the mid-1970s, when Suriname became

independent. The Netherlands' Antilles (including Aruba) are still part of the Dutch Kingdom, so Antillean migration to the Netherlands is more or less continuous, often, but not always, for study motives.

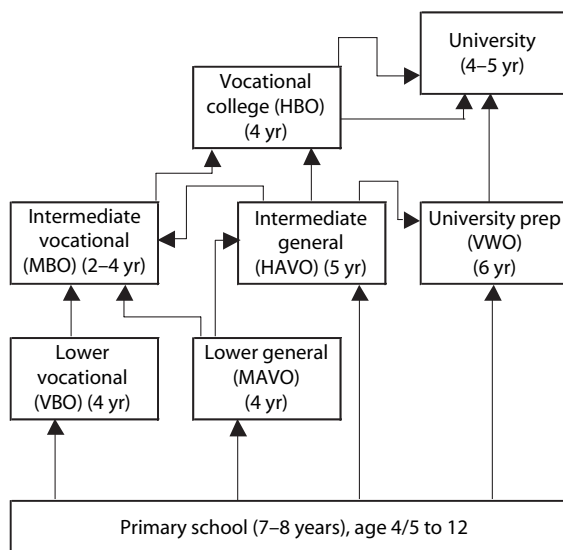
The third category of immigrants are more recent refugees, from countries such as Iran (29,000 immigrants at January 2006), Iraq (44,000), Afghanistan (37,000), and the former Yugoslavia (76,000). Many immigrants in the Netherlands belong to the fourth category, namely those of 'other' western origin. This heterogeneous category includes (the children of) immigrants from neighbouring countries – Germany (380,000), Belgium (112,000), the UK (76,000) – but also from North America, the Pacific, and other regions. In recent times, the Netherlands has also witnessed a large inflow of migrants from new EU countries, Poland in particular.

For various reasons, we do not examine the educational performance of refugees and 'other' western groups in this article. Refugees are not well represented in surveys: they have migrated to the Netherlands since the 1990s, and their numbers are too small for useful analysis. Because the western groups are assumed to integrate smoothly, survey instruments, including the one we use, often do not contain detailed information on their country of origin. In this article, we look in detail at the educational performance of two groups from the first category (Turks and Moroccans) and two groups from the second category (Surinamese and Antilleans).

## THE DUTCH SCHOOLING SYSTEM

The Dutch educational system can be characterized as highly stratified, with many different tracks at various levels of schooling. It is also strongly vocationally specific, with vocationally oriented tracks at lower secondary, upper secondary and tertiary level. In the past decade, the lower secondary vocational school has been merged with the lower general track into the *Voorbereidend Middelbaar Beroepsonderwijs* (VMBO), but in the data that we analyse here, these are still separated. Figure 1 displays the Dutch educational system as it was for pupils enrolled in secondary school in 1993. It can be seen that an important choice of secondary school type is made after primary school at age 12, although many schools offer one or two 'bridge years' that postpone this schooling decision. Still, the choice made has many implications for further options in the later educational career, which is the reason why we focus on this educational transition in this article.

The available school types after primary school vary strongly in selectivity, with the lower vocational school type (VBO) the least selective and VWO the most selective. In between are the lower general (MAVO) and intermediate general tracks (HAVO), respectively. Access to school types



**Figure 1** The Dutch educational system

is based on two elements: the score on a nationally standardized primary school test (called the CITO test), and the advice of the primary school (in practice, the teacher). The standardized school test is taken on two days in February of the last primary school year (normally at the age of 11 or 12, depending on the birth date). Schools are not obliged to participate in the CITO test, but about 85 percent of schools do participate. Schools that take the CITO test are more meritocratic than schools that do not; the influence of social origin on school advice is significantly smaller, and the influence of school achievement stronger, in schools that use the CITO test (Luyten and Bosker, 2004).

Essential to the Dutch selection system into secondary schooling is the fact that these two elements determine the options that are open to pupils, and that parents do not have the final say in school type choice (although it is obviously possible to enrol in a lower-level school type than would be expected on the basis of test scores and advice).

## THE ETHNICITY VERSUS CLASS DEBATE IN THE NETHERLANDS

Several studies in the Netherlands have examined gross and net ethnic differences in education, before and after taking social class background

into account. The studies differ in many ways, one of them being the population under investigation.

One line of research examines the role of ethnicity and social class in *primary* education, drawing on the large-scale Primair Onderwijs cohort (PRIMA) cohort surveys initiated in the year 1988 (Driessen, 1995, 2006; Gijsberts, 2003; Oomens et al., 2003). These studies unequivocally conclude that pupils of the major non-western immigrant groups from the Caribbean (Surinamese, Dutch Antilleans) and particularly from the Mediterranean (Turks, Moroccans) are at a large disadvantage when they start primary education. Their language skills are approximately two years behind those of natives and their mathematics skills about half a year behind (Gijsberts, 2003). Mediterranean pupils have fewer language and mathematics skills in the second year of primary schooling (when pupils are about six years of age) than native pupils, even taking into account social class and other factors (Oomens et al., 2003). Following the same pupils throughout their primary schooling reveals that minority students make more progress in language and mathematics than native Dutch students, thereby diminishing ethnic differences (Gijsberts, 2003).

There are still ethnic differences at the start of *secondary education*, however. Despite the fact that minority students in the Netherlands receive better recommendations by their teachers and choose higher levels of education than would be justified according to their achievements at the end of primary schooling (Gijsberts, 2003; Luyten and Bosker, 2004), on average they are more often found in the lower tracks than are native Dutch students (Herweijer, 2003). Several studies have examined the role of ethnicity and social class in secondary education. Because the focus of the present study is on secondary education as well, Table 1 presents an overview of previous research. The studies primarily use the VOCL 1989 data, which is a large-scale survey that followed up pupils beginning their secondary schooling in 1989. Another data source is the SPVA (1988), which is a cross-sectional survey and specifically designed to study Turks, Moroccans, Surinamese and Antilleans. The studies presented in Table 1 differ in the educational outcomes studied: school advice at the end of primary education, achievement tests, educational level and drop out and mobility into a lower track. Another difference between the studies is the measurement of social class background and which other factors are included in the equation.

Overall, the studies report few, if any, differences across ethnic groups once social class background is taken into account. All studies find a strong effect of social class, and of parental education in particular. What remains of the small ethnicity effect is to a small degree attributable to factors such as the number of children, home language use, parental involvement with school activities, length of parents' residence in the Netherlands, and various other potentially relevant characteristics of the family (Roelandt

**Table 1** Overview of studies on ethnicity, social class background and secondary education in the Netherlands, 1990–2005

| Study                                | Population               | Data                              | Dependent variable             | Ethnicity                    | SES  | Other                                 | Main findings  |
|--------------------------------------|--------------------------|-----------------------------------|--------------------------------|------------------------------|--|---------------------------------------|--|
| Roelands, Martens and Veenman (1991) | – Secondary education    | – SPVA 1988                       | – Educational level            | – Turkey                     | – Education and occupation of head of household (HH) | – Length of residence (HH)            | – Strong effect social background  |
|                                      | – Immigrants and natives |                                   |                                | – Morocco                    |  | – Stage at which pupil entered school | – Net negative ethnicity effect  |
|                                      | – 12 to 18 years old     |                                   |                                | – Suriname                   | – Number of rooms per person                         | – Orientation towards Dutch society   |  |
| Van't Hof and Dronkers (1993)        |                          |                                   |                                | – Antilles                   |  | – Age                                 |  |
|                                      |                          |                                   |                                |                              |  | – Gender                              |  |
|                                      | – Secondary education    | – VOCL 1989                       | – Advice secondary education   | – Turkey                     | – Occupation father                                  | – Number of children                  | – Strong effect education, particularly of the mother  |
|                                      | – Immigrants and natives | – Small sample natives (N = 1000) | – Language test first year     | – Morocco                    | – Unemployment father                                | – Younger sibling                     |  |
|                                      |                          |                                   |                                | – Suriname                   | – Education father                                   | – Older sibling                       |  |
|                                      |                          |                                   |                                | – Antilles                   | – Occupation   | – Reading parents                     | – Ethnicity has no net effect on maths; weak net negative effect on most other outcomes              |
|                                      | – Cohort 1989            |                                   | – Maths test first year        | – Molukkes                   | – mother   | – Cultural participation parents      | – Higher school advice for ethnic minorities   |
|                                      |                          |                                   | – Information test first year  | – South Europe               | – Unemployment mother                                | – Discuss school with parents         |  |
|                                      |                          |                                   | – Educational level first year | – China                      | – Education mother                                   | – Achievement parents                 |  |
|                                      |                          |                                   |                                | – Other                      |  | – Gender                              |  |
| Wolbers and Driessen (1996)          |                          |                                   |                                | – Native                     |  | – Home language                       |  |
|                                      |                          |                                   |                                | – Interethnic marriage       |  | – 1.5 generation                      |  |
|                                      | – Secondary education    | – VOCL 1989                       | – Advice secondary education   | – Suriname/Antilles/Molukkes | – Occupation family                                  | – Number of children                  | – Strong effect education family   |
|                                      | – Immigrants             |                                   | – Language test first year     | – Morocco                    | – Highest education family                           | – Duration                            | – Ethnicity has only weak net negative effect on language and maths, no net effect on other outcomes |
|                                      | – Cohort 1989            |                                   | – Maths test first year        | – Turkey                     |  | – Home language                       |  |
|                                      |                          |                                   | – Educational level third year | – South Europe               |  |                                       |  |
|                                      |                          |                                   |                                | – Other                      |  |                                       |  |



**Table 1** (Continued)

| Study                        | Population   | Data  | Dependent variable   | Ethnicity   | SES  | Other   | Main findings   |
|------------------------------|--|---|--|---|--|---|---|
| Hustinx (2002)               | <ul style="list-style-type: none"> <li>– Secondary education Cohort 1989</li> </ul>                        | <ul style="list-style-type: none"> <li>– VOCL 1989</li> </ul> | <ul style="list-style-type: none"> <li>– Advice secondary education</li> <li>– Achievement first year</li> <li>– Educational level first five years</li> </ul> | <ul style="list-style-type: none"> <li>– Turks</li> <li>– Moroccans</li> <li>– Surinamese</li> <li>– Antilleans</li> <li>– Molucces</li> <li>– Natives</li> </ul> | <ul style="list-style-type: none"> <li>– Highest education of the more highly educated parent</li> </ul> |   | <ul style="list-style-type: none"> <li>– Strong effect education parent</li> <li>– Lower achievement ethnic minorities</li> <li>– Higher advice and higher educational levels ethnic minorities than natives</li> </ul>   |
| Van Ours and Veenman (2003)  | <ul style="list-style-type: none"> <li>– Secondary education Age 15 to 29</li> </ul>                       | <ul style="list-style-type: none"> <li>– SPVA 1998</li> </ul> | <ul style="list-style-type: none"> <li>– Educational level</li> </ul>  | <ul style="list-style-type: none"> <li>– Turks</li> <li>– Moroccans</li> <li>– Surinamese</li> <li>– Antilleans</li> <li>– Natives</li> </ul>                     | <ul style="list-style-type: none"> <li>– Education father</li> <li>– Education mother</li> </ul>         | <ul style="list-style-type: none"> <li>– Age</li> <li>– Generation</li> <li>– Gender</li> <li>– Language proficiency parents</li> </ul>   | <ul style="list-style-type: none"> <li>– Strong effect education parents</li> <li>– Ethnicity has no net effect, except for better position Moroccan females</li> </ul>   |
| Kalmijn and Kraaykamp (2003) | <ul style="list-style-type: none"> <li>– Secondary education Immigrants and natives Cohort 1989</li> </ul> | <ul style="list-style-type: none"> <li>– VOCL 1989</li> </ul> | <ul style="list-style-type: none"> <li>– Drop out and downward mobility</li> </ul>   | <ul style="list-style-type: none"> <li>– Turks/Moroccans</li> <li>– Surinamese/Antilleans</li> </ul>  | <ul style="list-style-type: none"> <li>– Average education parents</li> </ul>                            | <ul style="list-style-type: none"> <li>– Parental involvement</li> <li>– Single parent</li> <li>– Five or more children</li> <li>– Young mother</li> <li>– Mathematics ability</li> <li>– Language ability</li> <li>– Gender</li> <li>– Duration in school</li> </ul> | <ul style="list-style-type: none"> <li>– No effect education parents on drop out; negative effect on downward mobility</li> <li>– Net ethnicity effect: ethnic students are more likely to move 'out' rather than 'down' in comparison to Dutch students</li> </ul> |

(Continued)

**Table 1** (Continued)

| Study                    | Population  | Data  | Dependent variable  | Ethnicity   | SES   | Other  | Main findings  |
|--------------------------|---|---|---|---|---|--|--|
| Luyten and Bosker (2004) | <ul style="list-style-type: none"><li>– Primary education; second-generation immigrants and natives; in 2000/2001 in final grade primary school</li></ul> | <ul style="list-style-type: none"><li>– PRIMA-IV</li></ul>      | <ul style="list-style-type: none"><li>– School advice</li></ul>                             | <ul style="list-style-type: none"><li>– Surinamese/Antillean</li><li>– Turkish/Moroccan</li><li>– Other</li><li>– Natives</li></ul> | <ul style="list-style-type: none"><li>– Education parents; interaction with ethnicity</li></ul> | <ul style="list-style-type: none"><li>– Urbanization</li><li>– Ethnic composition of school</li><li>– Ability</li><li>– Effort</li><li>– Gender</li><li>– Perceptions of teacher</li></ul> | <ul style="list-style-type: none"><li>– Positive effect of Turkish/Moroccan origin on school advice; controlled for other characteristics; – Positive effect parental education, urbanization, % non-minority children</li></ul>   |
| Luyten (2004)            | <ul style="list-style-type: none"><li>– Secondary education</li></ul>   | <ul style="list-style-type: none"><li>– LEOVO 1992–98</li></ul> | <ul style="list-style-type: none"><li>– Educational level first year; fourth year</li></ul> | <ul style="list-style-type: none"><li>– Surinamese/Antillean/Turkish/Moroccan</li><li>– Other</li><li>– Natives</li></ul>           | <ul style="list-style-type: none"><li>– Education parents; cultural capital</li></ul>           | <ul style="list-style-type: none"><li>– Urbanization</li><li>– Gender</li><li>– Generation</li><li>– Abilities</li><li>– Truancy</li><li>– Primary school composition</li></ul>            | <ul style="list-style-type: none"><li>– Positive ethnicity effect on level of schooling in year 1, and in level in year 4, controlled for level in year 1</li><li>– Positive net effect of parents' education on level in year 1, not on level in year 4</li><li>– No effect of cultural capital</li></ul> |

et al., 1991; Van 't Hof and Dronkers, 1993; Wolbers and Driessen, 1996; Van Ours and Veenman, 2003).

Although studies report few net ethnic differences in secondary education, it is important to mention that ethnic minorities sometimes do better than natives with comparable class background. Although studies find that ethnic minorities have lower achievements at entry into the secondary school, they have higher secondary school advice, and they choose higher levels of secondary education than natives with the same achievements (Hustinx, 2002; Luyten, 2004). In the literature, there is considerable debate about this net *positive* ethnic effect. Some researchers argue that ethnic minorities are 'over-advised', leading them to drop out from secondary school more frequently than natives, for whom capacities and achievements are better matched to their educational level (Herweijer, 2003; Tesser and Iedema, 2001). Indeed, research shows that minority students are more likely to drop out from school than native Dutch pupils (who choose downward track mobility instead), even after social class and other factors are considered (Kalmijn and Kraaykamp, 2003). Others, however, argue that over-advice has almost vanished among the pupils finishing primary school in 2003 (Driessen, 2006), and that even among the earlier cohorts, ethnic minorities are generally able to survive at the level of their advice (Hustinx, 2002).

After completing MAVO, HAVO or VWO, more than 90 percent of the pupils in the Netherlands choose to continue their education at MBO, HBO or University level (Herweijer, 2003). Similar to the transition from primary to secondary education, minority students are more likely to choose higher tertiary tracks compared to native Dutch pupils who obtained the same secondary education (Korteweg et al., 2003). However, because of their lower social class background and the lower tracks they followed at secondary school, minority students are over-represented in lower tertiary education and under-represented in university in the Netherlands. In 2001, about 17 percent of native Dutch students went to university against no more than 7 percent among students from Turkish and Moroccan origin (Herweijer, 2003). Minority students are more likely to drop out in tertiary education than native Dutch students, partly because they are somewhat older (Bosma and Cremers, 1996; Crull and Wolff, 2002). It is unknown how drop-out rates and other educational outcomes in tertiary education are related to ethnicity, once social class is taken into account.

## PRIMARY AND SECONDARY EFFECTS

### *Theory and earlier research*

Educational inequality is a result of, among other things, primary and secondary effects of social and ethnic background. The distinction between these two effects has been put forward with regard to class inequality in schooling (Boudon, 1974). An essential part of the impact of social class on educational outcomes comes about through class variations in early-demonstrated ability (such as in standardized tests in primary school). These effects, which could result from, for example, cultural, genetic, or economic factors, are called the primary effects of social class on educational outcomes. However, conditional upon early test scores, children from more advantaged social backgrounds often opt for more prestigious, higher-level tracks relative to children from less-advantaged backgrounds. This effect (controlling for test scores) is called the secondary effect of social background.<sup>2</sup>

Although the analytical distinction between primary and secondary effects of social class origin has not been very high on the agenda throughout the past 30 years,<sup>3</sup> it has recently revived (Goldthorpe, 1996a; Breen and Goldthorpe, 1997, 2001; Erikson et al., 2005; Becker, 2003; Breen and Yaish, 2006). It is a relevant distinction, not least because our understanding of both processes is important for designing social policy to reduce inequalities of educational opportunity. Reducing the primary effects of social origin on early school performance requires different policy measures from reducing the secondary effects of social origin on choices. For example, educational maintenance allowances given to poorer students will encourage them to stay on beyond the minimum school leaving age, and such a measure would particularly affect the secondary rather than the primary effect of social origin.

With regard to ethnic educational inequalities, the distinction between primary and secondary effects has not been analysed very often. Although some researchers have examined both educational performance and educational choice, controlling for performance of children of different ethnic origins, few have interpreted these findings as being primary and secondary effects (but see Hustinx, 2002), let alone making any calculation about the relative importance of each.

### *Meritocratic distribution of educational outcomes?*

The distinction between primary and secondary effects is relevant when examining to what extent inequalities result from true choices rather than from restrictions in terms of ability test scores. The meritocratization thesis suggests that academic ability increasingly affects educational outcomes,

whereas the impact of social or ethnic background should decline over time (Davis and Moore, 1945; Blau and Duncan, 1967; Goldthorpe, 1996b). According to this view, the secondary effect of social background should be reduced across time because ascriptive factors have made room for one's own achievements. However, merit includes more than just academic ability, but must also include the effort and dedication that people put into their own careers (Breen and Goldthorpe, 2001; Luyten and Bosker, 2004; Meijnen, 2004). Therefore, we examine the extent to which merit determines educational achievements by including measures of academic ability and effort. In previous work, effort was not considered at all (e.g. Hustinx, 2002), or insufficiently considered by looking only at truancy (Luyten, 2004).

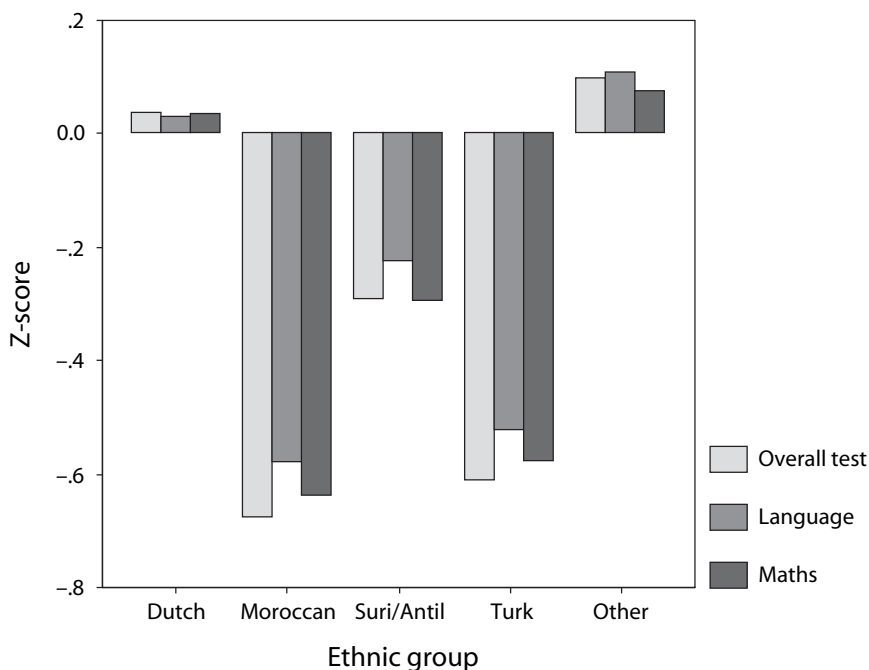
Based on findings from an earlier educational cohort study (VOCL, 1989; see Table 1), we expect that the ethnic variation in type of secondary schooling is fully attributable to variation in academic ability (hypothesis 1). Furthermore, Hustinx (2002) found that ethnic minorities were enrolled in *higher* levels of schooling than children from Dutch descent once ability and class are held constant. The question is whether this can be explained by a broader conception of merit. Based on the meritocracy thesis, it is expected that a potentially positive ethnicity effect could be explained by higher levels of effort displayed by ethnic minority youth, conditional on social class background and ability test scores (hypothesis 2). Hypotheses 1 and 2 thus follow from the idea that ethnicity affects secondary school type because of differential merit. A model that includes measures of merit should thus reduce the ethnicity effect relative to models that do not include merit indicators.

However, there are also reasons to believe that the ethnicity effect may become even more strongly positive once we observe differentials in relevant background characteristics. More specifically, ethnic minority youth have, on average, fewer resources in their family environment than do children of Dutch descent. Examples of such resources are knowledge about the Dutch school system, the use of Dutch language at home, parents helping with homework, and talking to your parents about school. Thus, controlling for these factors, children from ethnic backgrounds should be placed in higher educational tracks than children from Dutch descent (hypothesis 3).

## EMPIRICAL RESULTS

### *School achievements of ethnic groups*

In Figure 2, the average scores are displayed on the standardized school test, in language and mathematics, as well as the mean score across these



**Figure 2** Entry-level test in language and mathematics and its mean by ethnic group (Z-scores)

two domains. Scores are standardized with mean = 0 and standard deviation = 1. What we see is that children from Turkish, Moroccan, Surinamese and Antillean immigrants have lower than average scores on both language and mathematics of around 0.6 standard deviations. The mixed group of 'other' ethnic origin scores highest on all three measures.

Table 2 shows the cross-tabulation of secondary school type in year 3 by ethnic group. Here too we see a strong disadvantage of ethnic minority youth relative to children from Dutch origins. Among children of Dutch descent, about one-third opts for the lower vocational track, and another 31 percent for the lower general track. About 85 percent of Moroccan youth, and 80 percent of children from Turkish immigrants, choose these lower secondary tracks, which do not give access to tertiary education after completion. Among children of Surinamese and Antillean origin, the distribution is similar to the Dutch (and to the distribution of the total sample).

### **Multivariate models**

Above we saw that, at the bivariate level, children of ethnic minority origins, in particular from Turkish and Moroccan descent, perform worse in

**Table 2** Distribution of ethnic groups across secondary school types

| %          | <i>Secondary school type year 3</i> |                      |                             |                               | <i>Total</i> |
|------------|-------------------------------------|----------------------|-----------------------------|-------------------------------|--------------|
|            | <i>Lower vocational</i>             | <i>Lower general</i> | <i>Intermediate general</i> | <i>University preparatory</i> |              |
| Dutch      | 32.2                                | 31.8                 | 15.6                        | 20.4                          | 100          |
| Moroccan   | 57.3                                | 28.1                 | 5.6                         | 9.0                           | 100          |
| Suri/Antil | 32.2                                | 30.8                 | 17.1                        | 19.9                          | 100          |
| Turkish    | 49.5                                | 30.0                 | 10.0                        | 10.5                          | 100          |
| Other      | 28.3                                | 29.6                 | 17.6                        | 24.5                          | 100          |
| Total      | 32.4                                | 31.6                 | 15.6                        | 20.4                          | 100          |

standardized primary school tests measuring academic ability, and are more often enrolled in lower educational tracks in the third year of secondary school than children of Dutch descent. It remains to be seen, however, whether these differences are attributable to social class and, with regard to secondary school type, academic performance. Therefore, we estimate several regression models in which we control for relevant variables. With regard to the models predicting academic ability, we include, step-by-step, parental occupational class and educational level (the class versus ethnicity model), and a number of variables related to family resources that are usually beneficial for schooling (the parental resources model). These include parental involvement with homework, whether pupils talk about school with their parents, parental knowledge of the Dutch educational schooling system, whether pupils have a network surrounding their family with whom they can talk about school, and the usage of the Dutch language at home.

In the ordered logit models estimating the odds of enrolment in four secondary school types, we first estimate the ethnicity versus class model. (See the appendix for a short explanation of ordered logit models; see also Agresti, 1990.) Second, we include a single measure of merit, operationalized as academic test score (meritocracy model A). Third, we separate the language score and the mathematics score into two measures of academic ability (meritocracy model B). Fourth, we conceptualize merit in a broader perspective by including variables that indicate effort. These indicators are ‘performance motivation’ and ‘homework orientation’ (meritocracy model C). A similar measure of effort has been employed by Breen and Goldthorpe (2001). Fifth, we add the variables related to parental resources (the parental resources model).

The estimates of these regression models are displayed in the Appendix (see Tables A1 and A2). Figures 3 and 4 display the ethnic variations of all of these models graphically. Figure 3 is based on an ordinary least squares regression on the academic ability test scores (general and for language and mathematics separately). This graph shows that, controlling for social class, children from Turkish and Moroccan backgrounds perform equally well as children from Dutch descent. Only children from Surinamese and Antillean origin perform slightly worse than Dutch children from similar social class positions, around 0.2 standard deviations below the Dutch. However, after holding constant parental resources, this difference vanishes too. The only persistent significant effect is the positive effect of the 'other' category. Their academic ability is slightly higher than that of children of Dutch descent. Given the fact that many children of western migrants will be part of this group, a potential explanation of this positive effect originates from the high selectivity of this group, which is not fully captured by standard measures of social class and parental resources. Remarkably, the higher ability test scores of people from 'other' ethnic groups is only found with regard to Dutch language, and not with regard to mathematics. The fact that the language test score is more strongly influenced by parental background than the mathematics test score (Brandsma and Knuver, 1989) supports the self-selection argument of western migrants.

It should be noted that the class versus ethnicity models assume that we can compare educational attainments of immigrant parents and native parents; which may be more difficult than it seems. For instance, given the highly skewed distribution of educational attainment of immigrants, of whom a significant share has not even completed primary education, our operationalization of parental education (with one value for primary level or lower) may not differentiate among crucial parental attainments for immigrants, whereas for the native population a distinction between finished and unfinished primary education would be ineffectual.

In Figure 4, we see that the odds of enrolling in one type of schooling higher, relative to any level below that, is lower for children from Turkish and Moroccan origins compared to children of Dutch descent. However, in the class versus ethnicity model, we see that this difference is fully attributable to their social class, and not to their ethnicity. Moreover, Turkish children as well as children from 'other' ethnic groups have a significantly higher chance of enrolling in higher-level tracks than Dutch children of the same social class origin. If we add indicators of ability (meritocracy models A and B), this positive difference relative to Dutch children becomes significant for all ethnic groups. However, if we extend the conceptualization of merit to include effort (meritocracy model C), the positive effect of Moroccans becomes insignificant. Thus, among children of similar social class backgrounds *and* similar levels of merit, ethnic minority children attend on average a *higher* level of schooling than Dutch children, with the



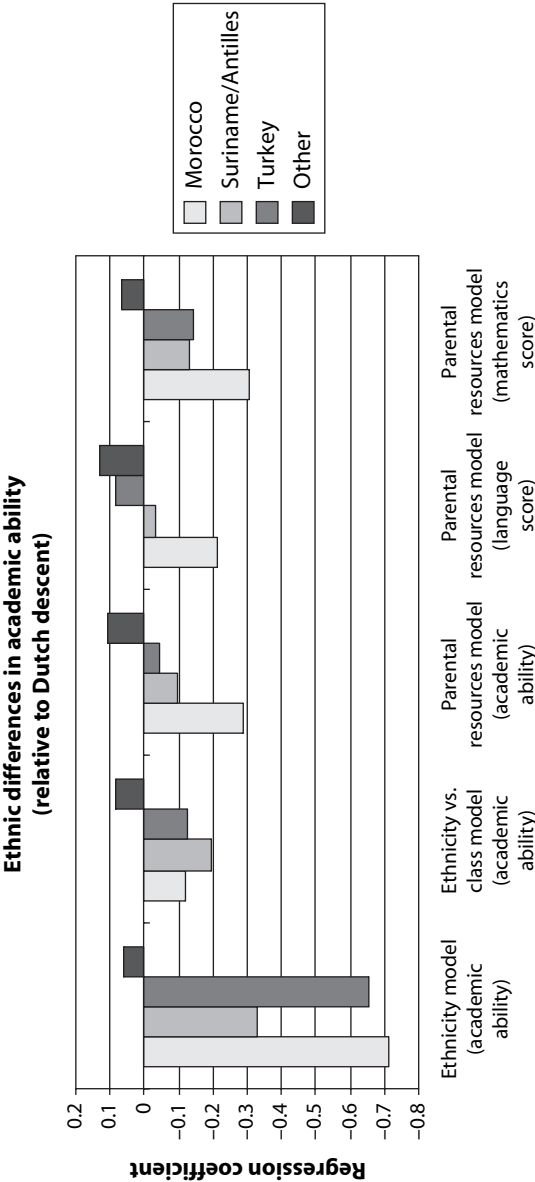


Figure 3 Ethnic differences in academic ability (entry-level test)

exception of children of Moroccan descent, whose higher track placement in meritocracy model B is driven by their higher level of effort. The effect for Moroccan, Surinamese, Antillean and Turkish immigrants' children does not lose any of its strength when parental resources are included in the model, which is logical given the lower level of resources among children of immigrants relative to Dutch children. However, children of 'other' migrants are enrolled in higher tracks because they have more parental resources at their disposal. In the discussion later, we will give some tentative explanations for the high-track enrolment of children of immigrants.

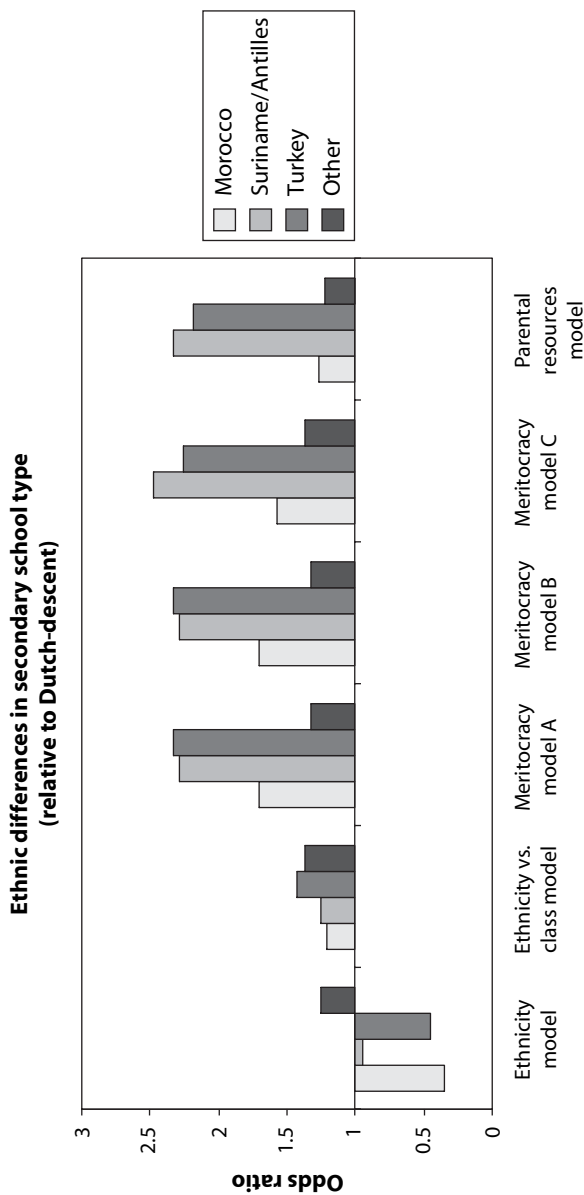
In Table A2 the parameter estimates (see Appendix), we see furthermore that parental background continues to affect type of schooling, controlling for merit. Thus, the higher-track placement of children of more advantaged social backgrounds is not fully attributable to their higher level of academic ability.

Looking at these results in terms of primary and secondary effects, we can see that observed overall schooling differences across ethnic groups, as displayed in Figure 2 and Table 1, largely result from the primary effects of ethnicity on academic ability. Among children of equal abilities, no secondary effect of ethnic minority background hinders their educational outcomes. On the contrary, the secondary effect of ethnic minority background is such that, conditional upon academic ability, ethnic minority children choose relatively often *more ambitious tracks* in secondary school.

With regard to social class, however, both primary and secondary effects are found. The odds ratios of parents' educational level are reduced by a factor of 2.5 to 3 from the ethnicity versus class model to the meritocracy models, but remain significant. Thus, about one-fourth of the total effect of parental education is secondary; the remainder is primary. Erikson et al. (2005) found similar relative sizes of primary and secondary effects of social class on A-level enrolment in England and Wales.

## CONCLUSION AND DISCUSSION

In this article, we studied ethnic inequalities in schooling in the Netherlands, focusing on four large minorities: Turks, Moroccans, Surinamese and Antilleans. Our main findings are that ethnic minorities attend lower levels of education and score lower on achievement tests. These ethnic differences, however, are attributable to social class background: taking into account the lower parental education and occupational class, ethnic differences in achievement vanishes, and differences in secondary school type almost disappear. What remains of the differences in educational level is not an ethnic penalty, but an ethnic advantage: Turks, Moroccans, Surinamese and Antilleans choose higher types of secondary schooling than



**Figure 4** Ethnic differences in secondary school enrolment

natives with comparable class backgrounds. These findings are in line with previous work by Hustinx (2002), who examined an earlier cohort than our study.

In addition to earlier observations, we find that such a positive ethnic effect persists even when we conceptualize meritocratic forces in a more general way. Thus, whereas earlier studies have looked at entry-level ability test scores, we also examined performance motivation and homework orientation (both indicating effort). However, in the analysis that includes both academic ability and effort, ethnic differences remain. In further analyses, we find that such differences do not become larger or smaller when we control for parental resources. In conclusion, ethnic minorities follow higher tracks than similar natives in the Netherlands.

Two important questions result from our study: (1) Why is the net ethnicity effect on test scores so small in the Netherlands? (2) Why do ethnic minorities choose higher levels of education than comparable natives? To start with the first question, one could argue that the Netherlands is a meritocratic country in which talents, abilities and effort are far more important than ascribed characteristics such as gender, age and ethnicity (cf. Meijnen, 2004). The potential negative effects of having an ethnic background are forcefully treated by policy measures. For example, the Dutch government takes measures to diminish residential concentration of immigrant groups, and schools with more minority students receive additional funding from the Dutch government. On the other hand, one could argue that, although ethnicity is not a relevant factor in the Netherlands, social class background is. In our study and previous work, it is consistently observed that pupils from higher-educated and more resourceful parents perform better in school.

Also, although the *net* ethnicity effect may be zero in a model controlling for social class, this does not imply that ethnicity is irrelevant. Part of the relationship between ethnicity and (parental) social class could be causal, for example because ethnic minority parents achieve lower social class positions through processes of discrimination. Then, a small direct ethnicity effect on school performance of children could be partly an indirect effect of ethnicity through social class position. Although the literature summarizes a non-effect as providing evidence that ethnicity is irrelevant, this interpretation ignores the potential causality between ethnicity and social class.

The second question is more difficult to answer. Why is there a positive secondary ethnicity effect? As we see it, there are various answers to this question. Before discussing them, there are also arguments as to why the ethnic difference might even be *larger* than observed in our study. One issue is that ethnic minorities are more disadvantaged in terms of parental resources than we considered in our study. Most notably, ethnic minority groups have a higher fertility ratio, smaller houses and lower incomes than

natives. It is well known that sibling size, the number of people per room, and parental income are associated with educational success.

Furthermore, related to the oppositional culture hypothesis of Ogbu (1997), one could argue that the expected benefits for educational qualifications are smaller among ethnic minority groups than among the native majority. It is well known that ethnic minorities in the Netherlands are discriminated against in the labour market. Obtaining additional schooling does not help bridge the unemployment and earnings gap between ethnic minorities and natives: ethnic minorities are more often unemployed and receive lower earnings than similarly qualified natives. Indeed, figures for the Netherlands show that the differences between ethnic minorities and natives are particularly pronounced for the higher educated (Dagevos, 2003). This leads many young ethnic minorities to reject school as a means to socioeconomic mobility, and hence they may drop out from school before obtaining a diploma. For those reasons, one would expect that ethnic minorities would be less motivated to do well at school. Although we included performance motivation in our study, it could be that this measure does not fully capture anticipated discrimination.

Why then is there an ethnic advantage in the Netherlands? One way to respond to this question is that it is wrongly posed. One could argue that we have looked at only the 'positive' dimensions of school differences. Although it might be true that, controlling for socioeconomic background, ethnic minorities attend higher levels of education than natives, this does not tell the whole story. A possible consequence of attending higher levels of education is 'over-advice', which might result in higher drop out rates. There is considerable discussion in the literature about the nature of the higher drop-out rates among ethnic minorities (Tesser and Iedema, 2001; Hustinx, 2002; Herweijer, 2003; Kalmijn and Kraaykamp, 2003; Driessen, 2006), and this needs to be considered and further researched before concluding that ethnic minorities are generally well off in the Netherlands. However, in an additional analysis, we analysed drop-out rates simultaneously with track placement. This analysis revealed that the positive ethnicity effect remains for those who remain in school. In other words, ethnic minorities more often drop out of school, but among those who stay in school, they are more often found in higher tracks than native Dutch students with equal backgrounds and merit in similar ways, as shown in the analyses of this article.<sup>4</sup>

There is another reason to say that the question is wrongly posed: the positive ethnicity effect might be severely *over-estimated*. The reason is that social class is measured in terms of parental occupation and income, but most often parental education. Educational qualifications obtained outside highly industrialized countries are difficult to compare directly to schooling obtained in the Netherlands. In countries like Morocco and Turkey, many people do not attend school at all, and the average education is therefore far

beyond that of the Netherlands. This means that those who obtained, say, at most secondary schooling in Turkey performed much better *relatively* than those who did so in the Netherlands, where financial and institutional barriers to tertiary education are much lower. Parents of immigrant pupils from non-western countries are more intelligent, more talented than equally educated parents of native pupils in the Netherlands. In other words, even though social origin has been controlled, a class versus ethnicity model is unable to compare like with like. If this reasoning were to be true, the ethnicity effect would be much *less positive, if not negative*. Against this reasoning, it can be objected that we include entry-level academic ability in our analysis and that, even when ability is controlled, a positive ethnic effect remains. However, the hidden talents of ethnic minority parents can go partly unnoticed in such a test, because it measures cognitive abilities and host-country-specific skills and knowledge. The higher potential cognitive abilities of ethnic minorities, which result from genetic inheritance, are not crystallized at the age of 12. One way to examine this issue would be to include general rather than host-country-specific tests of abilities.

Another argument that questions the presumed positive ethnicity effect is that regional – or more precisely, school – differences have gone unnoticed in our analysis. Most ethnic minorities go to highly ethnically concentrated schools, whereas natives almost exclusively attend non-ethnic schools. In ethnically concentrated schools, average scores within educational tracks are possibly lower, which would make it more common to enter a certain educational track with lower scores. This issue can be addressed in further research by comparing natives and immigrants within the same schools.

Several explanations can be offered for the positive ethnicity effect, on the assumption that there is such an effect. First, children from immigrant groups may be *more* ambitious to do well in school relative to Dutch children. Rather than anticipating ethnic discrimination later in life, pupils might compare their educational chances with those of their parents, who have had much less opportunities. Second, migrants are assumed to be more ambitious relative to the ones that did not migrate (Chiswick, 1978). Therefore, it can be expected that there is a relatively high level of active stimulation and motivation towards school performance in ethnic minority families relative to Dutch families of similar characteristics. Yet, given the fact that we controlled for parental resources and performance motivations, this explanation does not seem to be substantiated.

## Notes

- 1 Educational researchers suggest that a bridge year can be placed in between the school types that it combines on an interval scale (Hustinx et al. 2005). However,

- we do not see any reason to place the main school types on a linear scale, let alone bridge years.
- 2 Some have argued that it is difficult to disentangle primary from secondary effects, as the secondary process of choice and the primary process of school performance are affecting each other. (Ambitions are affected by performance, but performance may also be affected by the aspired level of schooling.)
  - 3 An exception is Halsey et al. (1980).
  - 4 Results of these analyses are available from the authors upon request.

## References

- Agresti, Alan (1990) *Categorical Data Analysis*. New York: Wiley.
- Becker, R. (2003) 'Educational Expansion and Persistent Inequalities of Education – Utilizing Subjective Expected Utility Theory to Explain Increasing Participation Rates in Upper Secondary School in the Federal Republic of Germany', *European Sociological Review* 19: 1–24.
- Bennett, Pamela R. and Yu Xie (2003) 'Revisiting Racial Differences in College Attendance: The Role of Historically Black Colleges and Universities', *American Sociological Review* 68: 567–80.
- Blau, P.M. and O.D. Duncan (1967) *The American Occupational Structure*. New York and London: Wiley.
- Bosma, H. and P. Cremers (1996) 'Sociaal-economische verschillen bij de doorstroom naar de universiteit' (Socioeconomic differences in access to university), *Mens en Maatschappij* 71: 142–53.
- Boudon, Raymond (1974) *Education, Opportunity, and Social Inequality*. New York: Wiley.
- Brandsma, H.P. and J.W.M. Knuver (1989) 'Effects of School and Classroom Characteristics on Pupil Progress in Language and Arithmetic', *International Journal of Educational Research* 13: 777–88.
- Breen, Richard and John H. Goldthorpe (1997) 'Explaining Educational Differentials: Towards a Formal Rational Action Theory', *Rationality & Society* 9: 275–305.
- Breen, Richard and John H. Goldthorpe (2001) 'Class, Mobility and Merit: The Experience of Two British Birth Cohorts', *European Sociological Review* 17: 81–101.
- Breen, Richard and Meir Yaish (2006) 'Testing the Breen–Goldthorpe Model of Educational Decision Making', in S.L. Morgan, D.B. Grusky and G.S. Fields (eds) *Mobility and Inequality: Frontiers of Research in Sociology and Economics*, pp. 232–58. Stanford, CA: Stanford University Press.
- CBS (Statistics Netherlands) (2006) Website [<http://statline.cbs.nl>].
- Chiswick, B.R. (1978) 'The Effect of Americanization on the Earnings of Foreign-born Men', *Journal of Political Economy* 86: 897–921.
- Crull, M. and R. Wolff. (2002) *Talent gewonnen. Talent verspild. Een kwantitatief onderzoek naar de doorstroom van allochtone studenten in het hoger onderwijs 1997–2001* (Talent won. Talent lost: A quantitative research on access of minority students in higher education 1997–2001). Utrecht: ECHO.
- Dagevos, J. (2003) 'Werkende minderheden: beroepsniveau, tijdelijke banen en

- mobilitéit' (Working minorities: Occupational level, temporary jobs and mobility), in J. Dagevos, M. Gijsberts and C. van Praag (eds) *Rapportage Minderheden 2003*, pp. 231–56. The Hague: Sociaal en Cultureel Planbureau.
- Davis, Kingsley and Wilbert E. Moore (1945) 'Some Principles of Stratification', *American Sociological Review* 10: 242–9.
- Driessen, G. (1995) 'Het relatieve belang van sociaal milieu en etnische herkomst voor de verklaring van onderwijsachterstanden: een overzicht van kwantitatief-empirische studies: bevindingen en problemen' (The relative importance of social class and ethnicity for the explanation of educational inequality: findings and problems), *Tijdschrift voor onderwijsresearch* 30: 341–62.
- Driessen, G. (2006) 'Het advies voortgezet onderwijs: is de overadvisering over?' (The advice on secondary education: Has over-advising disappeared?), *Mens & Maatschappij* 81: 5–23.
- Erikson, Robert, John H. Goldthorpe, Michelle Jackson, Meir Yaish and D.R. Cox (2005) 'On Class Differentials in Educational Attainment', *PNAS* 102: 9730–3.
- Gijsberts, M. (2003) 'Minderheden in het basisonderwijs' (Minorities in primary school), in J. Dagevos, M. Gijsberts and C. van Praag (eds) *Rapportage Minderheden 2003*, pp. 63–109. The Hague: Sociaal en Cultureel Planbureau.
- Goldthorpe, John H. (1996a) 'Class Analysis and the Reorientation of Class Theory: The Case of Persisting Differentials in Educational Attainment', *British Journal of Sociology* 47: 481–505.
- Goldthorpe, John H. (1996b) 'Problems of "Meritocracy"', in R. Erikson and J.O. Jonsson (eds) *Can Education Be Equalized? The Swedish Case in Comparative Perspective*, pp. 255–87. Boulder, CO: Westview Press.
- Halsey, A.H., A.F. Heath and J.M. Ridge (1980) *Origins and Destinations: Family, Class, and Education in Modern Britain*. Oxford: Clarendon Press.
- Herweijer, L. (2003) 'Voortgezet onderwijs, beroepsonderwijs en hoger onderwijs' (Secondary education, vocational education, and higher education), in J. Dagevos, M. Gijsberts and C. van Praag (eds) *Rapportage Minderheden 2003*, pp. 111–42. The Hague: Sociaal en Cultureel Planbureau.
- Hustinx, P.W.J. (2002) 'School Careers of Pupils of Ethnic Minority Background After the Transition to Secondary Education: Is the Ethnic Factor Always Negative?', *Educational Research and Evaluation* 8: 169–95.
- Hustinx, P.W.J., H. Kuyper, M.P.C. Van der Werf, and D.H. Zijlsling (2005) *Beschrijving leerlingbestanden VOCL'93*. Groningen: GION.
- Kalmijn, M. and G. Kraaykamp. (2003) 'Drop Out and Downward Mobility in the Educational Career: An Event-history Analysis of Ethnic Schooling Differences in the Netherlands', *Educational Research and Evaluation* 9: 265–87.
- Korteweg, J.A., M. Van Leeuwen, U. De Jong, I. Van der Veen (2003) 'Sociaal milieu en de keuze tussen hbo en wo', *Tijdschrift voor hoger onderwijs* 21: 2–16.
- Luyten, H. (2004) 'Succes in het voortgezet onderwijs: capaciteiten, inzet of achtergrond?' (Success in secondary education: capacities, effort, or background?), *Pedagogische Studiën* 81: 151–66.
- Luyten, H. and R.J. Bosker (2004) 'Hoe meritocratisch zijn schooladviezen?' (How meritocratic is school advice?), *Pedagogische Studiën* 81: 89–103.
- Meijnen, Wim (2004) 'Het concept Meritocratie in het voortgezet onderwijs' (The concept of meritocracy in secondary education), *Pedagogische Studiën* 81: 79–87.
- Ogbu, John U. (1997) 'African American Education: A Cultural-Ecological



- Perspective', in H.P. McAdoo (ed.) *Black Families*, pp. 234–50. Thousand Oaks, CA: Sage.
- Oomens, S., G. Driessen and P. Scheepers (2003) 'De integratie van allochtone ouders en onderwijsprestaties van hun kinderen: enkele allochtone groepen vergeleken' (The integration of minority parents and educational achievements of their children: some minority groups compared), *Tijdschrift voor sociologie* 24: 289–312.
- Roelandt, T., E. Martens and J. Veenman (1991) 'Ethnic Minority Children in Dutch Education: Ethnic Stratification, Social Class and Migration', *Netherlands Journal of Social Sciences* 27: 92–107.
- Tesser, P.T.M. and J. Idema (2001) *Rapportage Minderheden 2001: Vorderingen op school* (Minorities report 2001: Progress in schooling). The Hague: Sociaal en Cultureel Planbureau.
- Van 't Hof, L. and J. Dronkers (1993) 'Onderwijsachterstanden van allochtonen: klasse, gezin of etnische cultuur?' (Educational backlogs of minorities: Class, family or ethnic culture?), *Migrantenstudies* 1: 2–25.
- Van Ours, J.C. and J. Veenman. (2003) 'The Educational Attainment of Second-generation Immigrants in the Netherlands', *Journal of Population Economics* 16: 739–53.
- Wolbers, M. and G. Driessen (1996) 'Milieu of migratie? Determinanten van schoolloopbaanverschillen tussen allochtone leerlingen in het voortgezet onderwijs' (Social background or migration? Determinants of school career differences between minority pupils in secondary education), *Sociologische Gids* 43: 349–66.

**HERMAN G. VAN DE WERFHORST** is Professor of Sociology in the Department of Sociology and Anthropology, University of Amsterdam. Address: Department of Sociology and Anthropology, University of Amsterdam, Oudezijds Achterburgwal 185, 1012 DK, Amsterdam, the Netherlands. [email: H.G.vandeWerfhorst@uva.nl]

**FRANK VAN TUBERGEN** is Associate Professor in the Department of Sociology/ICS at Utrecht University. Address: Department of Sociology, ICS, Utrecht University, Heidelberglaan 2, 3584 CS Utrecht, the Netherlands. [email: F.vanTubergen@uu.nl]

## APPENDIX

### Data

We make use of the Dutch Educational Cohort study of 1993 (VOCL, 1993), comprising a representative sample of schools and pupils within

schools who enrolled in secondary education in 1993. We make use of the merged dataset comprising all waves (Hustinx et al., 2005), although we only use variables from the first-year and third-year data collections, among students without a delay in secondary school.

### **Variables**

All variables that we use were created from the data by the data collection team (Hustinx et al., 2005), except for the country of origin and the usage of Dutch language. The scales for subjective items have been extensively validated and checked for reliability in the educational studies research in the Netherlands. For some variables, we would have preferred to classify groups ourselves, in particular parental occupational class. However, for privacy reasons, the publicly released data give no more detailed information than is used here.

For country of origin, we took in principle the mother's country of origin. However, when the mother was from the Netherlands and the father was an immigrant, the father's country of origin was used instead. This definition follows the official definition of country of origin of Statistics Netherlands.

'Usage of Dutch language at home' is a dummy variable indicating the usage of Dutch in conversations with father and mother. The variable has the value 1 if Dutch is spoken with at least one parent, possibly *in combination with* a Dutch dialect or Frisian, and zero otherwise. Exclusive usage of dialects or Frisian in conversations with parents does not count as Dutch language use.

The mathematics and language tests in the present data are taken in the first year of secondary school. This test resembles the test taken in the last year of primary school, but it should be noted that it was taken again for the present survey.

Homework orientation was measured with 12 items asking students to indicate homework activities: re-reading homework to trace mistakes; making raw drafts of homework first; asking for explanation of assignments that are not clear; letting somebody else look at one's homework; re-reading assignments of preceding lessons; making assignments ahead; making summaries; making notes in class; underlining words or sentences; rehearsing oneself; having someone rehearse oneself; re-reading study material of preceding lessons (answer categories: hardly ever; sometimes; often; almost always). This scale has a reliability of 0.72 (Hustinx et al., 2005).

Performance motivation is measured using four items: 'I like to make my schoolwork good, even if this takes effort'; 'I do not do the best I can at school' (reversed); 'I often think of something else in class' (reversed); 'teachers are happy with my school achievements'. Each of the items had

four answer categories, varying from ‘fully agree’ to ‘fully disagree’. The reliability of this scale is 0.59 (Hustinx et al., 2005).

### **Models**

We focus on two types of outcomes in the educational career. First, we analyse the demonstrated ability in year 1 of secondary school. This ability test resembles the nationally standardized final test at the end of primary school, and consists of mathematics and language achievement. We analyse individual achievements on the general test score (being the average on mathematics and language) as well as separately the scores on mathematics and language achievement.<sup>1</sup> Second, we focus on the school type in which students are enrolled in the third year of secondary school. Many schools have one or two ‘bridge years’ that combine several school types, in order to delay the decision in which school type to enroll. In the third year, the large majority of pupils have enrolled in one of the four regular school types in Dutch secondary schools: lower vocational (VBO), lower general (MAVO), intermediate general (HAVO), or university preparatory (VWO). Furthermore, in these models we do not control for first year school type nor for the advice that pupils were given by their primary school. This means that the observed inequalities in third-year schooling may in fact be a consequence of first-year enrolment or of differential advice at primary school, although Luyten (2004) showed that ethnic differentials persist throughout the secondary school years. On the other hand, potential problems regarding the ‘over-advice’ of ethnic minorities are partially eliminated because it can be assumed that third-year school type more strongly resembles true aptitude than first year enrolments. Furthermore, as advice is strongly based on the final primary school test, which is included in our model, we are confident that our analysis of third-year school type examines ethnic schooling inequality in an adequate way.<sup>2</sup>

The analysis of school type is estimated using ordered logit models. These models are suitable for dependent variables at an ordinal measurement level, such as school type. The ordered logit model assumes that the impact of independent variables on the odds of attaining one level higher versus maximally the preceding level are similar across the distribution (i.e. for each step alike); although different intercepts (called thresholds in these models) allow for different access rates of the different levels. The odds ratios of these models indicate with which factor the odds of one level up on the educational distribution versus maximally the preceding level change if the independent variable increases with unity; or, in the case of comparisons of ethnic groups, with which factor the odds change for one ethnic group versus the reference group of native Dutch students.

The estimates of the regression models are shown in Tables A1 and A2.

**Table A1** Regression of entry-level performance

|  | 1                      | 2                                | 3                               | 4                     | 5                   |
|--|------------------------|----------------------------------|---------------------------------|-----------------------|---------------------|
|  | <i>Ethnicity model</i> | <i>Ethnicity vs. class model</i> | <i>Parental resources model</i> | <i>Language score</i> | <i>Maths score</i>  |
| Gender (boy = 1)   | -0.021<br>[0.017]      | -0.031<br>[0.016]                | 0.043*<br>[0.020]               | -0.246**<br>[0.020]   | 0.278**<br>[0.020]  |
| Parents' country of origin (relative to Dutch)                 |                        |                                  |                                 |                       |                     |
| Morocco  | -0.714**<br>[0.106]    | -0.122<br>[0.101]                | -0.29<br>[0.169]                | -0.211<br>[0.171]     | -0.304<br>[0.173]   |
| Suriname/Antilles  | -0.331**<br>[0.069]    | -0.193**<br>[0.064]              | -0.094<br>[0.098]               | -0.032<br>[0.099]     | -0.129<br>[0.100]   |
| Turkey   | -0.653**<br>[0.073]    | -0.128<br>[0.070]                | -0.045<br>[0.107]               | 0.082<br>[0.108]      | -0.143<br>[0.110]   |
| Other  | 0.06<br>[0.035]        | 0.085**<br>[0.033]               | 0.108*<br>[0.043]               | 0.131**<br>[0.043]    | 0.069<br>[0.044]    |
| Parents' educational level (relative to primary)               |                        |                                  |                                 |                       |                     |
| Lower secondary  |                        | 0.250**<br>[0.034]               | 0.023<br>[0.051]                | 0.014<br>[0.051]      | 0.025<br>[0.052]    |
| Upper secondary  |                        | 0.492**<br>[0.032]               | 0.175**<br>[0.048]              | 0.163**<br>[0.049]    | 0.154**<br>[0.049]  |
| Short tertiary   |                        | 0.891**<br>[0.038]               | 0.517**<br>[0.054]              | 0.464**<br>[0.054]    | 0.468**<br>[0.055]  |
| Long tertiary  |                        | 1.199**<br>[0.046]               | 0.815**<br>[0.061]              | 0.697**<br>[0.062]    | 0.768**<br>[0.063]  |
| Parents' occupational class (relative to manual working class) |                        |                                  |                                 |                       |                     |
| Not employed   |                        | 0.024<br>[0.030]                 | 0.06<br>[0.042]                 | 0.076<br>[0.043]      | 0.037<br>[0.043]    |
| Self-employed  |                        | 0.185**<br>[0.028]               | 0.159**<br>[0.036]              | 0.132**<br>[0.036]    | 0.154**<br>[0.036]  |
| Lower non-manual   |                        | 0.198**<br>[0.029]               | 0.162**<br>[0.034]              | 0.178**<br>[0.035]    | 0.119**<br>[0.035]  |
| Intermediate occupations                                       |                        | 0.201**<br>[0.026]               | 0.164**<br>[0.031]              | 0.189**<br>[0.031]    | 0.114**<br>[0.032]  |
| Higher-level occupations                                       |                        | 0.276**<br>[0.030]               | 0.225**<br>[0.036]              | 0.241**<br>[0.036]    | 0.170**<br>[0.037]  |
| Parental resources   |                        |                                  |                                 |                       |                     |
| Involvement with homework                                      |                        |                                  | -0.212**<br>[0.011]             | -0.198**<br>[0.011]   | -0.186**<br>[0.011] |
| Talk about school with parents                                 |                        |                                  | 0.041**<br>[0.011]              | 0.047**<br>[0.011]    | 0.029**<br>[0.011]  |
| Knowledge on Dutch educational system                          |                        |                                  | 0.152**<br>[0.011]              | 0.126**<br>[0.011]    | 0.146**<br>[0.011]  |
| Network available to talk about school                         |                        |                                  | 0.036**<br>[0.010]              | 0.028**<br>[0.011]    | 0.036**<br>[0.011]  |
| Usage of Dutch language  |                        |                                  | 0.062*<br>[0.030]               | 0.069*<br>[0.030]     | 0.045<br>[0.031]    |
| Constant   | 0.050**<br>[0.013]     | -0.619**<br>[0.032]              | -0.336**<br>[0.053]             | -0.201**<br>[0.054]   | -0.389**<br>[0.055] |
| Observations   | 12983                  | 12983                            | 7623                            | 7623                  | 7623                |
| R <sup>2</sup>   | 0.01                   | 0.15                             | 0.19                            | 0.18                  | 0.17                |

Standard errors in brackets.

\* Significant at 5%; \*\* significant at 1%.

**Table A2** Ordered logit regression of secondary school type year 3

|   | 1                          | 2                                    | 3                              | 4                              | 5                              | 6                                       |
|---|----------------------------|--------------------------------------|--------------------------------|--------------------------------|--------------------------------|---|
|   | <i>Ethnicity<br/>model</i> | <i>Ethnicity vs.<br/>class model</i> | <i>Meritocracy<br/>model A</i> | <i>Meritocracy<br/>model B</i> | <i>Meritocracy<br/>model C</i> | <i>Parental<br/>resources<br/>model</i> |
| Gender (boy = 1)  | -0.388**<br>[0.031]        | -0.472**<br>[0.033]                  | -0.638**<br>[0.036]            | -0.604**<br>[0.038]            | -0.583**<br>[0.038]            | -0.542**<br>[0.050]                     |
| Parents' country of origin<br>(relative to Dutch)                 |                            |                                      |                                |                                |                                |   |
| Morocco   | -1.031**<br>[0.203]        | 0.187<br>[0.212]                     | 0.529*<br>[0.247]              | 0.529*<br>[0.247]              | 0.449<br>[0.253]               | 0.241<br>[0.423]                        |
| Suriname/Antilles   | -0.06<br>[0.124]           | 0.229<br>[0.128]                     | 0.830**<br>[0.143]             | 0.830**<br>[0.143]             | 0.904**<br>[0.146]             | 0.845**<br>[0.231]                      |
| Turkey  | -0.781**<br>[0.136]        | 0.358*<br>[0.145]                    | 0.847**<br>[0.164]             | 0.844**<br>[0.164]             | 0.815**<br>[0.166]             | 0.779**<br>[0.255]                      |
| Other   | 0.223**<br>[0.063]         | 0.310**<br>[0.066]                   | 0.282**<br>[0.073]             | 0.279**<br>[0.073]             | 0.313**<br>[0.074]             | 0.197<br>[0.102]                        |
| Parents' educational level<br>(relative to primary)               |                            |                                      |                                |                                |                                |   |
| Lower secondary   |                            | 0.373**<br>[0.071]                   | 0.037<br>[0.082]               | 0.037<br>[0.082]               | 0.06<br>[0.084]                | -0.236<br>[0.126]                       |
| Upper secondary   |                            | 1.000**<br>[0.068]                   | 0.524**<br>[0.078]             | 0.522**<br>[0.078]             | 0.540**<br>[0.079]             | 0.186<br>[0.120]                        |
| Short tertiary  |                            | 1.951**<br>[0.079]                   | 1.137**<br>[0.089]             | 1.135**<br>[0.089]             | 1.161**<br>[0.091]             | 0.782**<br>[0.132]                      |
| Long tertiary   |                            | 2.938**<br>[0.097]                   | 1.913**<br>[0.109]             | 1.915**<br>[0.109]             | 1.961**<br>[0.111]             | 1.568**<br>[0.154]                      |
| Parents' occupational class<br>(relative to manual working class) |                            |                                      |                                |                                |                                |   |
| Not employed  |                            | 0.130*<br>[0.060]                    | 0.123<br>[0.068]               | 0.119<br>[0.069]               | 0.152*<br>[0.070]              | 0.14<br>[0.104]                         |
| Self-employed   |                            | 0.554**<br>[0.055]                   | 0.465**<br>[0.061]             | 0.468**<br>[0.061]             | 0.500**<br>[0.062]             | 0.522**<br>[0.084]                      |
| Lower non-manual  |                            | 0.603**<br>[0.058]                   | 0.502**<br>[0.063]             | 0.497**<br>[0.064]             | 0.494**<br>[0.064]             | 0.476**<br>[0.081]                      |
| Intermediate<br>occupations                                       |                            | 0.620**<br>[0.051]                   | 0.544**<br>[0.056]             | 0.539**<br>[0.057]             | 0.537**<br>[0.057]             | 0.489**<br>[0.073]                      |
| Higher-level<br>occupations                                       |                            | 0.798**<br>[0.060]                   | 0.629**<br>[0.066]             | 0.626**<br>[0.066]             | 0.644**<br>[0.067]             | 0.609**<br>[0.084]                      |
| Merit indicators  |                            |                                      |                                |                                |                                |   |
| Entry-level academic<br>ability (year 1)                          |                            |                                      | 2.038**<br>[0.028]             |                                |                                |   |
| Entry-level language<br>ability (year 1)                          |                            |                                      |                                | 1.097**<br>[0.027]             | 1.089**<br>[0.027]             | 1.066**<br>[0.036]                      |
| Entry-level mathematics<br>ability (year 1)                       |                            |                                      |                                | 1.157**<br>[0.026]             | 1.161**<br>[0.027]             | 1.172**<br>[0.035]                      |
| Performance motivation  |                            |                                      |                                |                                | 0.245**<br>[0.020]             | 0.213**<br>[0.027]                      |
| Homework orientation  |                            |                                      |                                |                                | 0.038*<br>[0.019]              | 0.029<br>[0.025]                        |
| Parental resources  |                            |                                      |                                |                                |                                |   |
| Involvement with<br>homework                                      |                            |                                      |                                |                                |                                | -0.105**<br>[0.026]                     |
| Talk about school with<br>parents                                 |                            |                                      |                                |                                |                                | 0.044<br>[0.026]                        |

(Continued)

**Table A2** Ordered logit regression of secondary school type year 3

|  | 1                          | 2                                    | 3                              | 4                              | 5                              | 6                                       |
|--|----------------------------|--------------------------------------|--------------------------------|--------------------------------|--------------------------------|---|
|  | <i>Ethnicity<br/>model</i> | <i>Ethnicity vs.<br/>class model</i> | <i>Meritocracy<br/>model A</i> | <i>Meritocracy<br/>model B</i> | <i>Meritocracy<br/>model C</i> | <i>Parental<br/>resources<br/>model</i> |
| Knowledge on Dutch<br>educational system   |                            |                                      |                                |                                |                                | 0.205**<br>[0.026]                      |
| Network available to<br>educational system |                            |                                      |                                |                                |                                | -0.013<br>[0.025]                       |
| Usage of Dutch<br>language                 |                            |                                      |                                |                                |                                | -0.002<br>[0.073]                       |
| Observations                               | 13326                      | 13326                                | 13326                          | 13326                          | 12983                          | 7623                                    |

Standard errors in brackets.  
\* Significant at 5%; \*\* significant at 1%.

**Notes**

- 1 This means that we exclude the part of the final primary school test that measures ability in information processing.
- 2 Importantly, if we analyse first year school type using a linear model, where bridge years are placed in between the school types that they combine, we find very similar results as the ones presented here, in terms of signs and significances of regression coefficients. The only exception is that the (positive) ethnicity effects become more strongly positive in the model controlling for parental resources. These results are available upon request.